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ABSTRACT

The document presents five papers from a conference involving educators of deaf, blind, and deaf blind children. In "Challenge--Educating Deaf-Blind Children," F. Roberts discusses common societal concepts regarding the deaf blind, the teacher's role in dealing with these children, and the developmental approach to educational planning for the deaf blind. A second paper, "Education of the Child with a Vision Problem" by M. Leslie, defines degrees of blindness, reviews aids for the visually handicapped, and considers orientation and mobility for the blind. "Educating the Hearing Impaired: Guidelines for Teachers of the Visually Handicapped" (P. Simmons) deals with deafness in terms of etiology, language and communication development, current educational trends, and identifying behaviors. A brief history of deaf education is outlined in "The Multihandicapped Hearing-Impaired Child--Where He Has Been and Where He Is Now" (E. Shroyer); and a final paper, "The Blind Multihandicapped Child" (A. Galloway), offers suggestions for educators which include having a good background in motor development. (SBH)

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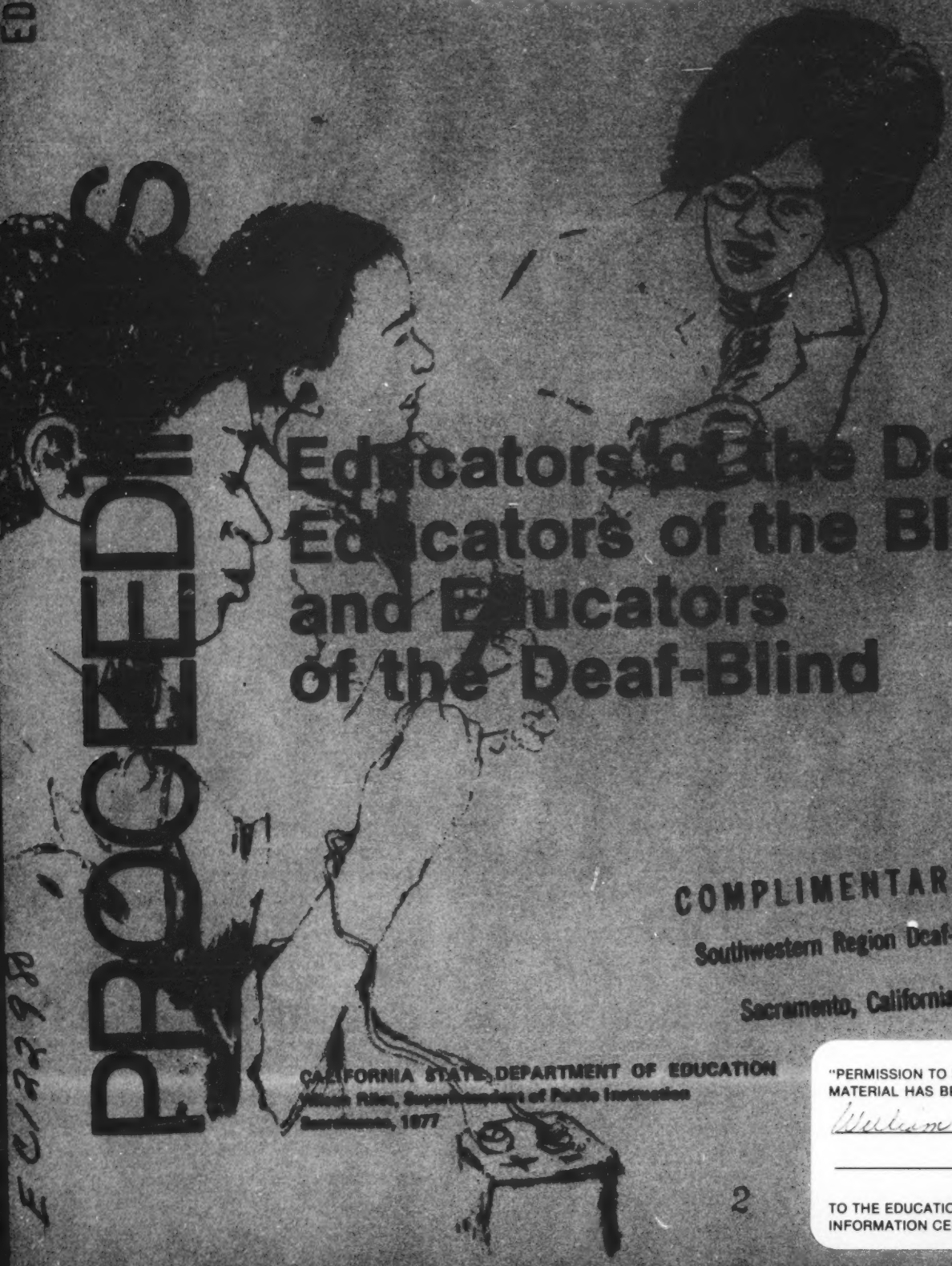

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Proceedings

Educators of the Deaf, Educators of the Blind, and Educators of the Deaf-Blind

A Conference held November 19–21, 1975
at San Diego, California

Prepared under the direction of

William A. Blea, Project Director
Southwestern Region Deaf-Blind Center

Sponsored by the

Southwestern Region Deaf-Blind Center
California State Department of Education

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Preface

This conference has brougnt together two diverse groups who have skills and knowledge valuable in the training of deaf-blind children. An important goal has been achieved in their meeting together. How many times in the past have professionals of the deaf and the blind met to share their knowledge with one another?

The deaf and deaf-blind share a unique handicap; the blind and the deaf-blind also share a unique handicap. The deaf and blind, however, do not share similar methodology to learning. Each is different because of different goals in teaching social, physical, emotional, and mental skills that contribute to their independent living. What about the deaf-blind? No historical precedent has been set in teaching such a large number of multiply handicapped persons. We are now establishing educational methodology; but, as soon as we believe we have resolved one problem, we become aware that our client is two or three years older and we have other problems. Growth waits for no one. When this happens, we may become frustrated and believe that our efforts show little or no results.

Norbert Weiner's, *The Human Use of Human Beings*, should influence our work with the deaf-blind. With some current educational approaches, it seems we ignore the humane approach and apply mechanistic techniques in teaching the deaf-blind. Operant conditioning methods, for example, should be used with utmost care when applied to humans. Behavior modification techniques are used indiscriminately at times, and in some instances this behavior modification knowledge is based only on information gained at a single workshop, foregoing an in-depth knowledge and awareness of the detrimental aspects that may come through misunderstanding. The end does not justify the means, and the deaf-blind do not deserve an untrained approach.

This conference has contributed a bit more to our knowledge and understanding of deaf-blind persons. We encourage all persons working with handicapped children to make certain that the educational approach stresses the humane aspect and that any methodology that purports to treat our children be rejected if it does not include the humane approach.

WILLIAM A. BLEA
Director, Southwestern Region
Deaf-Blind Center

Educators of the Deaf, Educators of the Blind, and Educators of the Deaf-Blind

Royal Inn at the Wharf
1355 Harbor Drive (at Ash Street)
San Diego, California 92101

Wednesday, November 19, 1975

5 p.m. ..... Registration

7 p.m. ..... Introduction and Welcome
William A. Blea, Ed. D.

Workshop Orientation–Regional Concept
Paul Starkovich

Keynote Speaker
Ferne Roberts
Department of Special Education
Hunter College
New York, New York

Thursday, November 20, 1975

9 a.m. ..... General Session

9:15–10:15 a.m.

A. Educators of Hearing Handicapped
Madge Leslie
Special Education Programs
Portland State University
School of Education
Portland, Oregon

B. Educators of Visually Handicapped
Patricia Simmons, Ph.D.
Department of Special Education
California State University, Los Angeles
Los Angeles, California

10:15–10:30 a.m. ..... Break

10:30–11:30 a.m. ..... Small Group Discussions

11:30–12:00 noon ..... General Session–
Summary of morning session

12 noon ..... Adjourn for Lunch

1–2 p.m.

A. Deaf, Multihandicapped
Dr. Edward Shroyer, Ph.D.
Department of Education
Gallaudet College
Washington, D.C.

B. Blind, Multihandicapped
Anne Galloway
Department of Special Education
California State University, Los Angeles
Los Angeles, California

2–2:15 p.m. ..... Break

2:15–3:15 p.m. ..... Small Group Sessions

3:15 p.m. ..... General Session–Summaries

Friday, November 21, 1975

9 a.m. ..... Panel on Deaf-Blind

Chairperson: William A. Blea, Ed. D
Family: Marilyn Sturrock
Instruction: Mary Musgrove
Recreation: Charles Dougherty, Ph.D.
Curriculum: Margo Dronek
Career Preparation: Paul Small
Parent Counseling: Paul Starkovich

12 noon ..... Adjourn for Lunch

1–2 p.m. ..... General Discussion

2 p.m. ..... Workshop Summary:
Recommendations and Conclusions

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Challenge: Educating Deaf-Blind Children

Presented by Ferne K. Roberts
Department of Special Education, Hunter College

You may have been lured to this conference under false pretenses. Nowhere in the program is there mention of a revival meeting. You had no way of knowing that someone was going to try to convert you—especially someone from New York City. Let me hasten to assure you that conversion to default and bankruptcy are not what I have in mind! Neither is it my intent to convert you through Madison Avenue subliminal stimuli or behavior modification or hard sell. Not at all. You see, I grew up in Iowa, where my parents' generation experienced the emotional appeal and fervor of Billy Sunday, the famous revivalist of the Bible Belt. It takes more than one generation to take the corn and the evangelical zeal out of an Iowan. This is an appeal to your emotions, but rest assured I will tell you exactly what I am doing so that you can throw up your defenses.

To show you that up-to-date techniques and current practices have been applied to this task of conversion, let me first state the behavioral objective: At the end of this revival meeting, nine out of ten teachers will clap their hands together at least five times to demonstrate that they are convinced they have the skills and the courage to take the risks necessary to help deaf-blind children learn.

The rationale for the objective includes the following points:

1. *It takes courage to say, "The buck stops here."* We are used to saying or hearing others say, "The other handicap is the primary problem." With multiply handicapped children, there *is* no other handicap; it is the combination of the handicaps that affects the child's growth and development. The child does not know or care which is the primary handicap; he just wants someone to help him.

2. *It takes courage to say, "I will and can teach this child."* Lots of people, including parents, doctors, psychologists, social workers, guidance counselors, school principals, residential school superintendents, and other teachers, have said, "I won't and I can't teach this child." Who are you to say you can in the face of all that evidence?

3. *It takes courage to say, "I will decide what useful things the child is ready to learn."* Most teachers know how to teach reading, writing, and arithmetic. The teachers in this room know how to teach those useful subjects to hearing handicapped and visually handicapped children. We know in general, also, when children are ready to learn these things. But it is different with multiply handicapped children. Some are ready to crawl around the eight ball and others to kick it out of the way; some do not even know it is there. Still others have battered foreheads from repeated tries at getting through it.

4. *It takes courage to say, "I'll try again."* We have been brainwashed into thinking that good teachers have to be successful all of the time. (If something doesn't work, then it must be the child who is at fault; and if the child is that faulty, then he or she doesn't belong here.) What if we said that no one is at fault, neither the teacher nor the child? Then, if something doesn't work, the teacher and the child just have a good laugh or a good cry and try a few changes.

Now, the behavioral objective being formulated, I must list some strategies which will help me convince you. Here some of our time-honored slogans will be very helpful: Go from the unknown. Start where the child is. Teach from the concrete to the abstract. Reinforce the desired behavior. And so forth. Publicly stated strategies really box us in; remember, I promised to have no hidden agendas. Speaking of hidden agendas, we have been playing one neat trick on multiply handicapped children for a long time. By "we" I mean schools and agencies who set up screening procedures and teams and conferences. They are often called "screening for admission" procedures, but they turn out to be screening for nonadmission. Somewhere along the line the results of various assessment activities get written down, and words like "cannot profit from instruction," "should be in a custodial setting," "family should be referred for counseling," and "behavior problems prevent inclusion of the child in a group" say all these things as if they were all-time truth. All

that schools have the right to say is that at the screening date the child did not fit the listed admission criteria. Remember that if a report comes from a program that was considering admission, the data need careful scrutiny.

Enough of digressions! I have to state the strategies, and this is always the hard part. The reason it is tricky for me to use the slogan, "Start where the audience is!" is that I do not know where you are, just as we do not know where multiply handicapped children are when we first meet them. Nor are we on safe ground in starting with the known and moving to the unknown, because I do not know what you know. So let's settle for starting with the familiar—the "they say" or "common knowledge" base—and move to what I hope will be some unfamiliar ways of thinking about teaching deaf-blind children. We will start with some common concepts and misconcepts and proceed to the teacher's role and from there to a developmental approach, to normalization, and to self-fulfilling prophecy.

Common Concepts

Society's attitudes toward the deaf-blind are rather confused. Mention of the words deaf-blind may bring to mind Helen Keller, Laura Bridgeman, Richard Kinney, Robert Smithdas, and Leonard Dowdy, or the words may instantly recreate a mental picture of a severely and multiply handicapped child, a victim of the rubella epidemic. All of these people bear the label deaf-blind, and they are all stigmatized. Goffman (1963) refers to the victims of stigmatization as having "spoiled" identities:

> Society establishes the means of categorizing persons and the complement of attitudes felt to be ordinary and natural for members of each of these categories. Social settings establish the categories of persons likely to be encountered there. The routines of social intercourse in established settings allow us to deal with anticipated others without special attention or thought. When a stranger comes into our presence, then, first appearances are likely to enable us to anticipate his category and attributes, his "social identity." . . . Typically, we do not become aware that we have made these demands, nor are we aware of what they are until an active question arises as to whether or not they will be fulfilled. It is then we are likely to realize that all along we had been making certain assumptions as to what the individual before us ought to be.

Those mixed messages leave us wondering whether we are teaching prodigies in disguise or children for whom self-care may be the ultimate goal. In these circumstances it is easy to pass the buck—to say that the other handicap is the primary problem. It is also easy for society or schools and agencies to deny service to deaf-blind children, youths, and adults out of fear—fear that they will fail in their efforts. Don't we human beings fear what we feel unequipped to handle? And isn't it the easiest way out to deny that the task can ever be accomplished? Or to question whether it is worth accomplishing?

If you were suddenly confronted by a lion 20 feet in front of you and you had no weapons or refuge, you would probably be correct in thinking that you were unequipped to handle the situation and that the chance of saving yourself from being mauled was slight. However, if you had a stick or a gun or if there was a lion trap between the two of you, you would have some means of protecting yourself. Let's admit it, though: if your right hand was on the open door of a car, you would likely choose to jump in and drive off. And unless you are a trained marksman or have a foolproof lion trap, driving away would be very sensible. But we cannot jump into cars and drive away from all scary situations. Some of us have to grab the nearest tools and learn how to use them.

The U.S. Office of Education is not usually thought of as a radical agency, but it takes a pretty firm stand against jumping into cars and driving away from multiply handicapped children. The Bureau of Education for the Handicapped, U.S. Office of Education, "is committed to assuring equal educational opportunities for all handicapped children." Objectives designed to implement this commitment are:

1. To assure that every handicapped child is receiving appropriately designed education
2. To assure that every handicapped child who leaves school has had career educational training that is relevant to the job market, meaningful to his career aspirations, and realistic to his fullest potential
3. To assure that all handicapped children served in the schools have a trained teacher or other resource person competent in skills required to aid a child in reaching his or her full potential
4. To secure enrollment of preschool-aged handicapped children in federal, state, and local educational and day care programs; and to encourage additional educational programming for severely handicapped children to enable them to become as independent as possible, thereby reducing their requirement

for institutional care and providing opportunities for self-development (Martin, 1975)

The Teacher's Role

Most of us have more than a passing desire to become better and better teachers of handicapped children. But what makes us good teachers? Would you agree that the teacher role includes (1) control of behavior; (2) control of the choice of subject matter; and (3) control of the thinking processes the children use? That third one is a real challenge, isn't it. Does control of the thinking processes children use have anything to do with teaching very severely handicapped children? It had better! Here are some thinking processes, more or less in hierarchical order: rote memorizing, inferring, abstracting, generalizing, hypothesizing, solving problems, and engaging in divergent thinking (Soar, 1975). Or some of you may prefer Gagne's list (1965), which he refers to as conditions of learning: signal learning; stimulus-response learning; chaining; verbal association; discrimination learning; concept learning; rule learning, and problem solving.

Agreement is probably universal that thinking is an indispensable human attribute. After all, it was the ability to engage in higher levels of thinking that helped man to rise above the animals. We could also probably agree that some weak thinking goes on in this all-too-human world and that we ought to find better ways to teach thinking. But very few educators have included "skill in controlling thinking processes" in their teacher-training programs. That is why the idea of controlling the thinking processes used by deaf-blind children sounds pretty scary.

Let's be sure we know what we are talking about here. We are not talking about mind control or brainwashing. We are talking about designing learning activities that stimulate children to use the most advanced thinking processes possible. Schools generally demand a lot of rote memory processing, and we may often assume that young or developmentally young children are still at the rote memory level, when they actually have reached a higher level of maturity. Conversely, we tend to assume that children can generalize long before they actually do. Have you ever said to your own children or to the children you teach, "Haven't I told you a hundred times not to . . .?" The problem may be that the child has deliberately chosen not to use your standard as his own, or it may be that while you think the circumstances are the same as on another occasion, the child does not see this connection at all. At this point we should consider the next step—the developmental approach.

The Developmental Approach

For the moment assume we all agree that the teacher role includes control of behavior, of subject matter, and of the thinking process children use. Those controls must be exercised with handicapped and nonhandicapped children alike. However, for more or less normal children, the school rules and the principal's stern voice may be sufficient to control behavior; the state curriculum and the reading or mathematics books may provide basic guidance on control of subject matter; and the questions at the end of the lesson will somewhat control the thinking processes used. The teacher still has a lot of room to exert influence on learning activities, but general mileposts are there. Nonhandicapped children seem to have a way of learning almost in spite of us, but severely handicapped children have to learn through us. Muddling through, that ability to survive in spite of bumbling and mistakes, is not what deaf-blind children do very well. Even if they were good at it, they do not have that kind of time to waste. If teachers have three important things to control and children have no time to waste, the teachers have to learn about child growth and development. For young and developmentally young children, milestones of development are the curriculum. How can the teacher control behavior in the learning situation unless the child's own level of behavior is understood and put into the context of the continuum of increasingly mature behaviors? How can the teacher control the subject matter of content of learning unless the child's own strengths and weaknesses are assessed and understood in terms of developmental tasks or sequences? And how can the teacher control the thinking processes used by children unless the developmental nature of thinking is understood? Knowing and applying what we know about child growth and development is the only way we can "start where the child is." In a sequence of steps from least mature to most mature, we must pinpoint the child's present level and then identify the next highest level that will realistically serve as the teaching objective.

We may choose from many developmentalists: Gesell, Bruner, Erikson, Piaget, Havighurst, or Ames. The choice of a developmental guru is up to us. But in the matter of applying sound developmental principles to educational planning for deaf-

blind children, there is no choice. There are two reasons for this no-choice situation. First and most obvious, each severely handicapped child is a real individualist in terms of his progress through developmental stages. Second, instruction must be individualized and delivered in a small group or individually, leaving very little margin for error. In a large group of relatively normal children, instruction is directed to the middle-ability level; those who are bright get bored, and those who are dull, flounder. But instruction for one or two or three children must zero in on the target, and that is why the group is kept small in the first place. This is the heart of special education for handicapped children. Instead of a state curriculum or a reading series or the local school guidelines, you have got to start carrying around a child development book or chart or scale or checklist, something to help you figure out where the child is and where he ought to go next.

Normalization

If you need an even stronger pitch regarding the value of a real working knowledge of child development, here it is: *normalization.* Normalization is

> . . . utilization of means which are as culturally normative as possible, in order to establish and/or maintain personal behaviors and characteristics which are as culturally normative as possible.
>
> (Wolfensberger, 1972)

Isn't that what we have been trying to do all along? Well, yes and no. Let's analyze that definition for a moment. First, the phrase "culturally normative." That means that (a) accepted behaviors and characteristics of the culture have to be analyzed; (b) the age and developmental levels at which the behaviors are acceptable must be known; and (c) the child's nearest approximation to that behavior must be observed and used as the basis for instruction.

Many deaf-blind children could make choices and decisions that have never been expected of them. People do not become decision makers at a given magic point; they learn this skill just as they learn other skills. Somewhere in early infancy options are presented to normal children; they learn to make simple choices and live with them. They learn that when two options are presented, they cannot have both of them. But severely handicapped children do not have many chances to learn for themselves that "you can't have your cake and eat it, too."

Look at this very simple example, which presents choices to an extremely dependent and handicapped child. Picture a child who lies in bed all day and all night. He rocks his head back and forth on the pillow. Someone puts a simple electric gadget under his pillow. Now he can turn on a light by moving this head to the left; he can move his head to the center and turn off the light; and by moving his head to the right, he can turn on music. He has learned to control a little bit of his otherwise deprived and routinized environment. And he has also learned that he has to choose, because he cannot have more than one choice at the same time.

With awarness of the concept of normalization, one begins to scrutinize almost everything having to do with teaching handicapped children, to question whether they are being given a chance to develop behaviors as near normal as possible for them. For example, in one class I observed, when it was time to line up the students at the door, ready to leave, the teacher told a moderately retarded girl of 16 to hold hands with the boy next to her. I did not question the procedure, which I have seen happen a hundred times. But a student visiting the class caught us all up short, because she was nagged by the normalization idea. First, she suggested that maybe the girl would have chosen to stand alone. Second, normal sixteen-year-olds do not hold hands with whomever they happen to be assigned. The normalization principle specifies that behaviors as culturally normal as possible be encouraged. If that teacher had a reason which we do not know, such as ensuring safety in the halls or preventing the girl from wandering off in the wrong direction, then she might still have decided that normal standing-in-line behavior was not possible for that girl. But the issue here is that hundreds of small daily activities have to be examined to determine which ones can be normalized, or more nearly normalized, in terms of the child's own age and developmental level.

Self-Fulfilling Prophecy

It is impossible to think about normalization without recalling the phrase "self-fulfilling prophecy" (Goffman, 1963):

> The stigmatized individual tends to hold the same beliefs about identity that we do; this is a pivotal fact. . . . He may perceive, usually quite correctly, that whatever others profess, they do not really "accept" him and are not ready to make contact on "equal grounds." . . . Further, the standards he has incorporated from the wider society equip him to be intimately alive to what others see as his failing, inevitably causing him . . . to agree that he does indeed fall short of what he really ought to be.

Furthermore, he implies that when stigmatized people fail to play the role that society expects or demands of them, they are even less acceptable.

Thus the two faces of the self-fulfilling prophecy belong to the prophesier and to the subject of the prophecy. In effect, two people look at each other. One says, "This is what I think you can achieve." And the other says, "Yes, I agree with you." In educational circles we tend to think that the goals we set for children affect our own instructional activities, and if the goals are set too low, the child will not reach his or her potential because we have not tried hard enough. But if Goffman is right, the pivotal fact is that children accept the low estimate of their abilities, or they "settle for" our estimates and play the role that is expected of them.

A few years ago a school decided to eliminate some of its programs for multiply handicapped children. When the children were dismissed, their cumulative report folders were sent to the new programs to which they were admitted with the reason for dismissal listed as "unable to profit from instruction." Many of these children had either been denied admission or were terminated from some of the very same programs which now took them in, but there was such a negative feeling about the sudden dismissals that schools and agencies rose up in indignation, took these children into their programs, and set about disproving that they were unable to profit from instruction. Some of the children did not make much progress in the new settings, but a surprising number not only progressed but took fantastic strides; and several of them were subsequently able to go into resource room programs. The teachers had decided to prove that the children could learn, and the children were foolish enough to believe them.

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Education of the Child with a Vision Problem

Presented by Madge Leslie
Professor, Special Education Program, School of Education, Portland State College

Many teachers and paraprofessionals have not worked with children who are blind or who have residual vision. These children represent a very small group.

In its recent film, *Realities of Blindness*, the American Foundation for the Blind estimates there are 2 million blind persons in the United States. Other figures vary from 500,000 to 2 million, depending on the source of information. Harley states that 0.04 percent of the total population of children registered at the American Printing House in 1969 were legally blind.

Degrees of Blindness

"Legal blindness" has been used by vocational rehabilitation agencies as a criterion to determine eligibility for services. By definition, legal blindness is 20/200 visual acuity in the better eye with correction or treatment, or a peripheral field so contracted that the widest diameter of that field subtends an angle no greater than 20 degrees.

Legal blindness actually covers a wide range, from useful residual vision down to no light perception. A person who has 20/200 vision sees at 20 feet what the normal eye sees at 200 feet. Visual acuity of 20/20 represents normal vision, not necessarily perfect vision.

Twenty degrees represents a narrow field of vision. Prick a piece of paper with a pin just enough to see through it. How many letters can you see at a time? Probably three or four. And of course, even if you have this much vision in each eye, the two eyes cannot focus on an object simultaneously. This type of vision will not be helped with enlarged type. If you conduct an experiment, you can see why.

The state of Oregon adds another legal dimension for rehabilitation purposes. Oregon law allows persons with deteriorating vision to be classified as eligible for service even though their visual acuity may be 20/100, subject to verification by an eye specialist.

For educational purposes the legal definition of blindness is not especially helpful. We need a more functional definition. Some teachers have suggested that services should be provided a child whose vision is such that he or she may be unable to profit from the usual educational procedures without additional help. Such help may be obtained from a special teacher or by use of some special equipment and materials.

The degree of visual acuity that can be measured (2/200 or 3/200) can help determine whether a child should use braille for reading and writing or whether print can be used. The child with less visual acuity may have useful vision for travel; only a few may have no light perception.

Having no light perception does not mean that one sees blackness. Most persons with no light perception say they see shades of grey.

The great majority of children have useful residual vision and should and will use this as the chief mode of learning. If one realizes that 20/60 visual acuity is all that is needed for reading a newspaper, one begins to realize that perhaps 20/20 visual acuity is nice but not all that necessary; 20/20 is an appreciable amount of vision.

Aids for the Visually Impaired

In order to compete in school and in some vocational and avocational pursuits, the person with visual impairment needs to utilize other modes of obtaining information, such as tapes, records, television, radio, the optacon, reader service, and optical aids.

Optical aids are magnifiers or telescopic lenses that may be held in the hand, placed directly on a paper, attached to one's regular glasses, or built into one's glasses. They enhance visual functioning but do not give one normal vision.

A young child can easily focus at close range, so materials should be brought as close to the face as needed in order to see. This is the cheapest and best means of magnification. As one gets closer to an object, it appears larger. The same principle applies when the child who needs to holds materials close or moves close to an object in order to see it. There is no way this can damage vision. Although an old wives' tale has persisted about "saving" sight, it is quite impossible to conserve

sight except in the context of prevention of disease and injury.

Because it is possible for a child to magnify materials naturally, children need not be given special large-type books in the primary grades. Primary books and materials are already in large type, and the child with vision impairment should have the same books and materials as anyone else, unless, of course, braille books are needed.

The child in the intermediate grades may need enlarged type, or may, if the eye specialist concurs, try some optical aids that can be placed on a line of print. At this time the special teacher might help the child try several aids and see if one might be of use.

When smaller print is used, as in mathematics formulas, an optical aid might be needed.

Large-type materials may be obtained from the American Printing House for the Blind in Louisville, Kentucky, or from volunteers; or a school can contract with the American Printing House to provide all books in the state course of study. The school district may contract with a company that can enlarge type, or the district may purchase equipment and produce its own books by a copying process if copyrights are not infringed.

Generally state departments of education can supply information about resources of books, materials, and equipment.

A child may need written materials with better contrast than is generally provided. Research has shown that black on white or white on black is best. A special teacher, if available, could go over materials with a felt pen to provide better contrast.

Children with visual impairment should be taught listening skills (indeed, the listening skills of all children might be better developed!) so that they can effectively use taped materials.

Braille reading is slow. Average speed is 100 words per minute; the print user with impaired vision averages 150 words per minute. Therefore, other modes for obtaining information are vital to these students.

Cassette tapes are in good supply now. The American Printing House can provide cassette machines with a variable speed component. However, students do need help in learning how to use such materials efficiently. Listen to a few tapes yourself before setting yourself guidelines for their use, and see what you learn from the tape.

Reader service is often utilized in high school and is paid for by the state department of education. Sometimes a classmate can read material to the child with a vision problem.

The optacon is a direct print-to-finger reading device. The print is seen by a small camera held in one hand and electronically transmitted to the finger of the other hand. The person must learn to recognize the letter pattern and can thus learn to read directly. Because it must be done letter by letter it is very slow, but for immediate information it is effective. The cost is considerable at this point.

Many children can function very well with few adjustments in the classroom. If a child has some vision, he or she may need only to move about to see. Such children may need more light, but with certain conditions (i.e., photophobia) they may seek a darker corner of the room or may cover the eyes to shut out light.

Children with visual impairment will probably need to use concrete manipulative materials for a longer time than the normally sighted child. A flannel board, a TV tray, or a magnetic board will help the child keep materials confined so they can be located easily and so they will not fall off the work area so readily.

The abacus is probably the best computational device this child can learn to use. In the form of simple counting frames suitable for the young child or the more sophisticated Saroban or Japanese counting frame, the abacus is now widely used as a functional tool. An adaptation available from the American Printing House for the Blind is called the Cranmer abacus. It has a felt pad under the beads so that they do not slide quite so readily.

A "talking calculator" is available from at least two sources, starting at $395. The calculator does the four basic kinds of computation plus square root and percent.

Most people are probably familiar with the braille writer. It is easier to use than the slate and stylus, but the slate is very compact and is easy to carry in one's pocket or purse.

Because of the various modes of reading and the availability of materials, this area of the curriculum is really not a problem area.

Mobility of the Visually Handicapped

Orientation and mobility are more serious problems to the person who is blind. If there is no light perception, the ability to get from place to place quickly is slowed. The greatest problems are experienced, however, by those young children who were ill for a long time in early life or who, because of fear or misunderstanding on the part of the parents, were not helped to explore their environment as infants. If children are encouraged

to reach out for toys, hands, or food, they will probably develop in a manner comparable with other children.

When a child who is blind comes to school and begins to explore the new environment, teachers and others should encourage the behavior—considering, of course, whatever safety factors need to be observed.

Children who are not going forth on their own will need the encouragement of teachers and parents. Parents are generally an excellent source of information about what the child can and cannot do.

An orientation and mobility instructor, if available, should be able to help in pinpointing concepts that need to be developed. *Up* and *down* are fairly easy to demonstrate manually and kinesthetically; *over* and *under* are much more difficult.

The child with a small amount of useful vision may also have some gaps in concept formation and may need additional experiences to develop them. This child needs to learn, too, to develop tactile sense. Certain tasks are more quickly accomplished by using the tactile sense. For example, a child may hold a coin up to the eye to tell what it is. It may be much easier to feel the edge and the size.

Children may need to be encouraged to use residual vision. The American Printing House can supply a "Visual Assessment Kit," which can be used to assess the child's vision. Ways to teach the child better use of that vision have been devised, and suggestions come with the kit.

Of greatest importance is the need for a child to become self-reliant and to feel personal satisfaction. He or she must share in the daily responsibilities at home and at school. Children gain satisfaction by contributing what they can, and they need to find out what is possible and what may be unrealistic for them. Each child is unique and must be allowed to develop individually, the adults providing an optimum climate for that growth.

Educating the Hearing Impaired: Guidelines for Teachers of the Visually Handicapped

Presented by Patricia Simmons
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Teachers of the visually impaired are especially attuned to the importance of the auditory process in the learning experience. In the absence of an adequate visual system, an individual can learn to accommodate and compensate to a marked degree through effective development and use of the auditory channel. A similar pattern of accommodation is utilized by the hearing-impaired individual who learns to develop visual modality to supplement or compensate for hearing loss.

Should we attempt to extend this simple analogy of accommodation further in terms of overall effectiveness, however, we realize that the system is far more successful for the visually impaired than for the hearing impaired. Why is this so? Primarily because learning in the educational sense is largely gained through language, whether in written or spoken form. This is mankind's most efficient coding and decoding system, barring any interfering deficits. Language is most effectively acquired through the auditory channel. Therefore, the visually impaired have the advantage in terms of verbal language learning and its subsequent facilitation of the broader learning experience. For those who are severely hearing impaired, verbal language remains an imposed, "learned" symbolic system, deprived of the rich, incidental auditory input.

Special Problems in Education of the Multihandicapped

Those of us in the field of special education are painfully aware that deficits seldom come singly. More and more of the individuals in our classrooms are multihandicapped to a greater or lesser degree. Jensema (1974) reported that 7 percent of the school-age hearing-impaired population have some form of visual deficit. The population categorized under the primary handicap of deafness includes one in every 1,000 of our school-age population. What about those children whose primary handicap is visual impairment? In most good programs for the visually impaired, hearing tests are part of the standard entry level assessment. Upon being given adequate assessment, children with hearing losses will be referred for special services in conjunction with those provided for their visual loss.

However, routine audiological testing procedures in most public school settings leave much to be desired. It is not uncommon for children with mild-to-moderate losses to remain undetected in the normal classroom as well as in the nondeaf special classroom. Therefore, they are denied the special interventions they need. The incidence of this combination of vision and hearing deficits presents a uniquely complicated education problem, both for the individuals concerned and for those who attempt to serve them. The training of professionals to serve in this combined area should logically combine preparation in both vision and hearing, as well as the compounded impact of both deficits on the learning experience.

Description of Deafness

In California an individual who falls within any of the following categories is classified, in educational terms, as deaf:[1]

1. The child has a hearing loss in the better ear that ranges from 70 decibels in the speech range to inability to distinguish more than two frequencies at the highest measurable level of intensity, with the result that he or she cannot understand and acquire speech and language through the sense of hearing, even with adequate amplification.
2. The child has a hearing loss in the better ear that averages 50 or more decibels in the speech range, and because he or she has had a sustained loss from babyhood or very early childhood, does not learn language and speech through the unaided ear.
3. In the combined opinion of a hearing specialist and a qualified educator, the child

[1]California Adminstrative Code, Title 5, Education, Section 3600(a).

would benefit from the special education facilities provided for the deaf.

Measurement of Deafness

In order to understand the above definitions, let us take a moment to find out how hearing is measured. A determination of loss of vision is made by comparison to a norm; the Snellen Chart, for example, has established 20/20 vision as normal. This figure represents the acuity of a normally seeing individual at 20 feet. Deviance from this norm is one measure of vision loss.

In the determination of deafness, the unit of measure is the decibel (db). Zero db is an arbitrary point based on an average hearing threshold for approximately 1,300 normally hearing people across an age range of six to seventy-six years. If you take a look at the audiogram in Figure 1, you will note a series of numbers across the top of the graph. These figures represent sound cycles per second expressed as Hertz (Hz) units. In everyday terms, the figures are concerned with the range of sound from low to high and can be likened to the musical scale. The speech range falls between 500 and 2,000 Hz. That means that the greatest amount of sound energy in human speech is concentrated at those frequencies. The numerals along the vertical side of the chart represent the range of intensity or loudness of a tone, ranging from zero to 110 db.

To give you some idea of the intensity or loudness of common environmental sounds, let's take a look at a graph of human hearing (Figure 2). You will note that a low whisper at 5 feet registers about 10 db; conversational speech at 10 to 20 feet registers 30 to 65 db; Niagara Falls registers about 95 db. In terms of frequency level (Hz), or low to high, the fundamental voice frequency for adult males is about 125 Hz; for females, 225 Hz; and for a crying infant, 512 Hz.

In assessing hearing loss it is necessary to consider both the frequence (Hz) and the intensity. If it were simply a matter of amplifying sound to make up for the loss, the problem would be relatively easy to solve. However, amplification must be concerned not only with intensity but with frequency or range of sound. Losses can affect either dimension or both dimensions.

Imagine an individual with a hearing loss such as that recorded on the audiogram presented in Figure 1. A variable loss of 50 db is indicated at 250 Hz; 80 db at 1,000; at 2,000 and above the reading is off the chart. If the individual were to be fitted with a hearing aid with a flat amplification of 60 db, there would be too much amplification for the lesser loss and not enough for the greater loss. This example is an oversimplified, and I hope nonexistent, use of amplification. Each individual has differential thresholds for pain, and care must be taken to avoid indiscriminate or gross amplification. Today's advances in audiological technology include differential (nonflat) amplification and binaural systems which offer separate amplification programming for each ear. It is necessary to point out that some forms of hearing loss do not respond to amplification alone.

Time of Onset of Deafness

Hearing loss may be described in terms of time of onset—a factor critical to educational programming. A child who is born deaf is considered congenitally deaf; one who becomes deafened after birth is called adventitiously deaf. Another taxonomy is concerned with acquisition of language: a child who is deaf before the so-called critical period of language development, 12 to 36 months, is called prelingually deaf; one who becomes deafened after this period is known as postlingually deaf. I must interject my own feelings in this last method of description. Working with handicapped children of all types from birth to three years old, I have become convinced that the critical period in language development begins at birth, just as it does for most major human behaviors.

Physiology of the Ear

In the act of hearing, air waves are translated and transformed by any sound which occurs in the atmosphere. These air waves are gathered in by the outer ear, transformed by the ossicles in the middle ear to mechanical energy, and again transformed into hydraulic energy as they set up motion within the canal and cilia in the inner ear. Eventually this energy becomes transformed once again into neural form as it moves on to the brain via the VIIIth cranial nerve. Time does not permit any great detail on the anatomy of physiology of the ear, but we should note that deficits can and do occur at any point along this pathway from air wave to brain wave. The major operations in the hearing modality are attention, discrimination, association, classification, and processing. These processes or operations, common to all human behavior, have an integral cognitive component. Again, difficulty or breakdown can occur in any one or more of these processes, which again is typical of any human behavior.

Name _____ Date _____

Birthdate _____

Cause _____

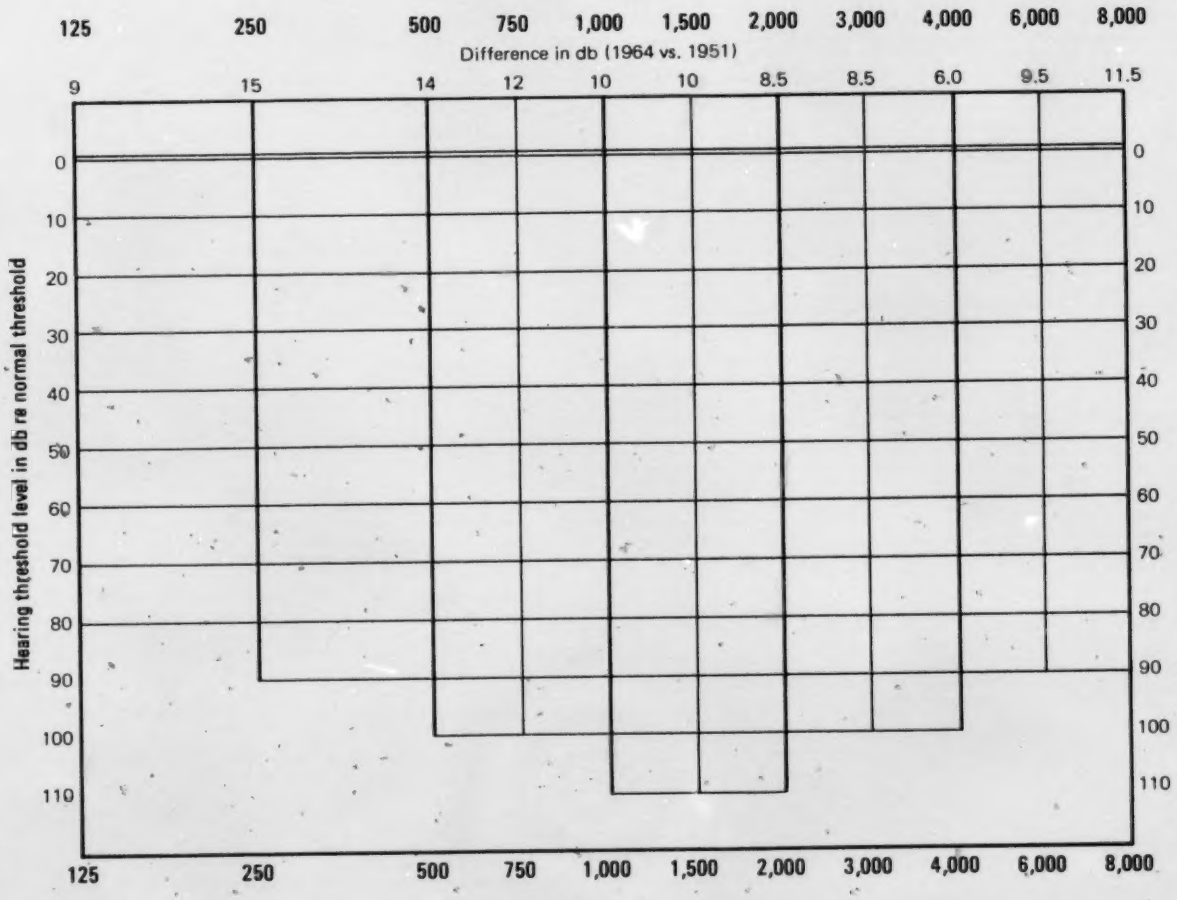

Fig. 1. Audiogram

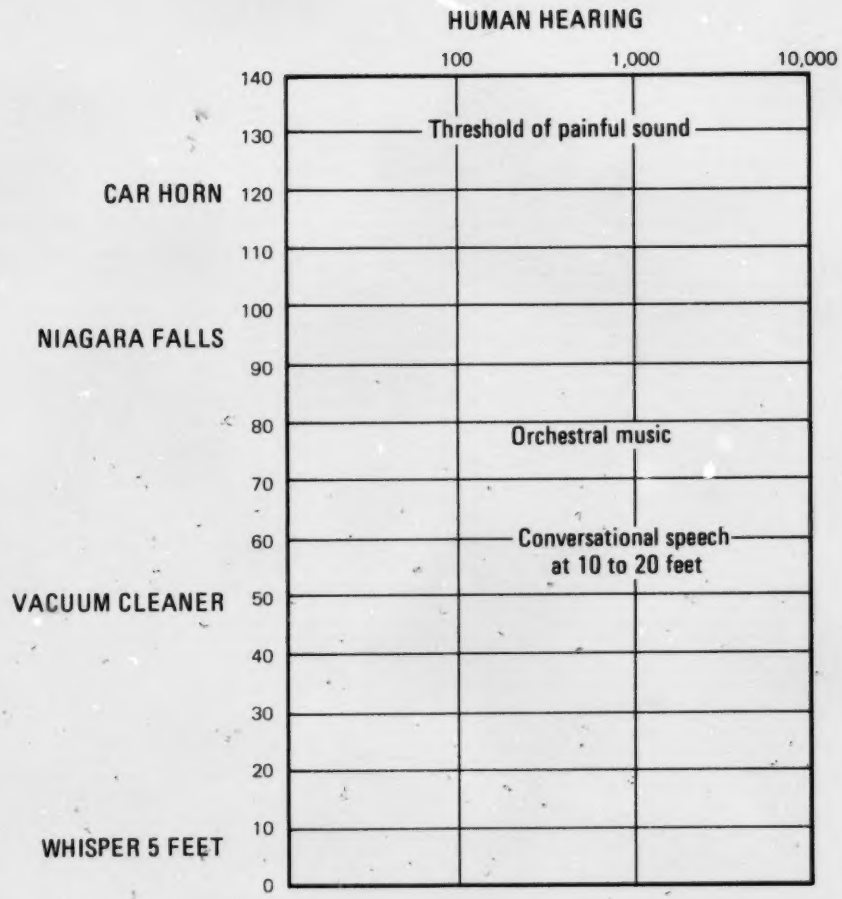

Fig. 2. Approximate Intensity Levels of Environmental Sounds.

Development of Language and Communication

A major concern in terms of education, once adequate assessment and amplification decisions have been made, is the development of language or communication. Two major methods of approach or philosophies currently operate in the area of the communication- or language-handicapped. One is the aural-oral method, which stresses visual, oral, speechreading, and auditory training and amplification and follows experiential or natural language approaches. The second method—total communication—adds the use of fingerspelling and sign language. Controversy continues to rage as to which method is more effective—when the concern should be for supplying what the individual child requires. No one system can meet all needs, and it is entirely possible that these two systems together or alone are not sufficient to meet all needs. Whatever the philosophy, I would hope that we would not proscribe any approach that might provide an alternate avenue to learning.

Another important concern in education of the hearing-impaired is the development, training, and utilization of residual hearing. Very few people have no usable hearing, and no matter how little hearing capability exists, it can be put to work to assist the individual in learning.

A third concern is the development of good reading and writing skills. The written word provides the individual with the single most important means of enlarging one's knowledge and understanding of the world beyond immediate experience.

Finally, just as the visually impaired rely on spoken language to widen their experience, so do the hearing-impaired rely on the visual channel to bring meaning and order to their experience, and this development of effective use of vision is a fourth area of emphasis in educational programming.

Current Trends

An increased awareness of how critically important to human development the first three years of life are has led to a growing emphasis on infant-family programs for the hearing impaired. California in particular has made significant contributions in this regard, with about 20 programs for deaf children from eighteen to thirty-six months old currently in operation and one or two experimental programs for six- to eighteen-month-old deaf children. At California State University, Los Angeles, we are presently operating a program through the Department of Special Education for newborn infants to thirty-six-month-old children of all exceptionalities. We have four hearing-impaired children in the program.

Another trend is seen in increased family participation at all levels, based on the rationale that home and school reinforcement and input of language is necessary to maintain good progress for the hearing-impaired child.

The amount and quality of audiological services provided through public school programs have also increased. Many programs staff a full-time educational audiologist who works closely with the classroom teacher and monitors amplification equipment continuously.

Indicators of Hearing Loss

Allow me to present a few "alert" behaviors which might indicate a hearing loss: inattention or overly tense concentration; discrepancy between performance on language-type tasks and other nonverbal tasks; slurred or indistinct speech; dropped word endings; too high or too low voice pitch; monotonous pitch; failure to respond to verbal directions; isolation in social situations; head tilted to side; preference for front seats; and requests for repetition of spoken messages. Many of these behaviors can be equated with a variety of learning problems, but it does not pay to disregard them.

A routine first step would be referral to the school nurse for a hearing test. You can discuss the next step with the nurse. Severe hearing impairment should indicate placement in a special program. If you have no program for the hearing impaired in your district, check on cooperative district or state residential programs. In cases of mild or moderate loss should you wish to keep the child in your classroom, request the aid of a consultant in hearing, an audiologist, or a speech therapist to help you in designing a program. If a specialist is not available, here are a few suggestions. First of all press for some type of auditory amplification, hearing aid, or auditory trainer if amplification seems to be indicated; arrange seating near the front of the class or close to the source of auditory stimuli; provide more visual input backup such as large print for the auditory message; stress reading skills; develop listening skills games and activities which should be of benefit for all your pupils; work with other teachers, regular and special, who might have hearing-impaired children in their classes; include the parents in the program, getting their ideas and assistance and helping them

with referral for services; and through local medical agencies, hearing clinics, and the State Department of Education, become familiar with federal, state, and community resources available to the child, the parent, and you.

In conclusion, I would like to stress the importance of becoming familiar with normal developmental sequences in language, cognition, social-emotional areas, and sensory-motor areas. Seek out curriculum guides that are based on these sequences, such as the preschool *Curriculum Guide for Hearing Impaired* developed in Marin County; *Systems FORE*, developed by the Los Angeles Unified School District; the *C.A.R.E. Project* developed by Los Angeles County, and various Piagetian-based curriculum guides such as Weikart's *Cognitively Oriented Curriculum*.

These backup sources should help you to detect lags or gaps in a child's development and perhaps provide means for minimizing or filling those lags and gaps. You can become a good observer of children, in light of normal developmental patterns, attaining a skill that is absolutely necessary for those of us working with exceptional children. This functional assessment will provide direction for more effective coordination of learning experiences and will complement more formal assessment data.

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Table A

Summary of Data on Additional Handicapping Conditions for Two Selected School Years: United States

Item	1968-69		1974-75	
	Number	Percent	Number	Percent
Total students enrolled in participating programs	25,363		47,235	
Participating students by number of additional handicapping conditions:				
None	14,685	57.9	27,931	59.2
One or more	6,445	25.4	13,737	29.1
Not reported	4,233	16.7	5,517	11.7
Percent of students by number of additional handicapping conditions, omitting students for whom data were not received:				
None		69.5		67.1
One or more		30.5		32.9
Total handicapping conditions reported	8,871		20,809	
Number of conditions per 100 students for whom data were reported	42.0		49.9	
Number of students with visual defects			3,558	
Percent of all conditions reported as visual defects		10.0		17.1
Number of conditions per 100 students for whom data were reported omitting visual defects	37.8		41.4	

Source: "Annual Survey of Hearing Impaired Children and Youth," Washington, D.C.: Gallaudet College (unpublished, 1975).

*Reporting form asked for the reporting of "severe" visual handicaps.

Table B

Summary of Data by Types of Additional Handicapping Conditions for Three School Years: United States

Condition	1972-73		1973-74		1974-75	
	Number	Percent	Number	Percent	Number	Percent
All types	19,040	100.0	19,012	100.0	20,809	100.0
Brain damage	1,537	8.1	1,455	7.7	1,571	7.5
Cerebral palsy	1,294	6.8	1,299	6.8	1,395	6.7
Heart disorders	411	2.2	414	2.2	469	2.3
Mental retardation	3,373	17.7	3,325	17.5	3,735	17.9
Orthopedic disorders	774	4.1	797	4.2	903	4.3
Perceptual–motor disorders	1,993	10.5	1,983	10.5	2,189	10.5
Emotional or behavioral problems	3,451,	18.1	3,360	17.7	3,457	16.6
Visual disorders	3,202	16.8	3,219	16.9	3,558	17.1
All other	1,846	9.7	2,001	10.5	2,223	10.7

Source: "Annual Survey of Hearing Impaired Children and Youth," Washington, D.C.: Gallaudet College (unpublished, 1975).

The Multihandicapped Hearing-Impaired Child: Where He has Been and Where He is Now

Presented by Edgar H. Shroyer, Ph.D.

The history of the education of the deaf goes back to 1817 when the first such institution, The American Asylum for the Deaf and Dumb in Hartford, Connecticut, was established. It appears fitting that one of the first documented attempts to educate a multihandicapped, hearing-impaired (MHHI) child was at that school. It is on record that in 1844, 27 years after the school was founded, teachers at the asylum worked with a deaf idiot (Gearheart and Litton, 1975).

Unfortunately, that bit of history is reflective of the progress which has been made towards educating MHHI children in the United States. What has happened in the 131 years since the first attempts were made at Hartford? Doctor (1959) sums up our progress and gives us a charge in a statement presented at the 39th Convention of American Instructors of the Deaf (CAID):

> The frontier in the field of deafness in the latter part of the twentieth century lies in the field of the multihandicapped. The nineteenth century saw the establishment of schools for the deaf, the beginning of teacher training on a professional basis, and the establishment of definite patterns of teaching the deaf. The first part of this century saw the establishment of electronic amplification in our schools. The problem now, as I see it, is in the area of deafness with additional handicaps.

Looking at the historical chronology of the MHHI child, we can say that only in the last 20 years has the MHHI child received any formal recognition:

1954 Before 1954 very little information is found in the literature. In 1954 formal recognition was given to the problem of MHHI children when the Conference of Executives authorized the *American Annals of the Deaf* to publish a list of schools and classes for MHHI children as a separate section in the statistical issue of the *Annals*.

1956 Elwood Stevens, Superintendent of the California School for the Deaf at Berkeley, presented a paper at the Conference of Executives in which he defined the problems faced by schools for the deaf in dealing with the growing numbers of MHHI children. He stated that schools should begin to recognize their responsibility in this field.

1957 Conference of American Instructors of the DEAF (CAID) established a section for consideration of MH individuals, but the papers presented did not really touch upon the subject.

1959 Workshops held at the CAID meeting included sections concerned specifically with hearing-impaired children who had additional handicapping conditions; i.e., were emotionally disturbed, blind, mentally retarded, and aphasic.

1961 The Illinois School for the Deaf established a program for MHHI children whose additional handicapping condition was other than mental retardation.

1964 The Babbage Report stated the education of the MHHI child is a major problem in the field of education of the deaf. Some schools were providing special classes but too often on an improvised and makeshift basis. The study committee had been unable to discover any data which fully revealed the dimension of the problem, yet it did find indications that the problem was of enough significance to warrant research.

1966 The California School for the Deaf at Riverside established a program for emotionally disturbed deaf boys. It was also in 1966 that McCay Vernon completed his doctoral dissertation on the causes and nature of learning disabilities, behavioral disorders, and physical defects in a sample of 1,468 deaf children.

1968 The Office of Demographic Studies (ODS) at Gallaudet College made the first comprehensive study of MHHI children in the United States.

Identification and recognition of the needs of the MHHI population was a slow process. However,

this does not mean that nothing at all was being done. State schools and hospitals, private agencies, and some school districts were probably providing modest services to the MHHI child, even though their endeavors were not brought to the profession's attention.

What is a MHHI child? The problem of defining a MHHI child is extremely difficult because of the variables that are involved, variables which, in turn, make the incidence and prevalence rates difficult to ascertain. Definitions used in one place may differ from those used in another. The definitions, which typically reflect the current sociocultural standards of a given society, are subject to constant change.

We must also consider the orientation of the person making the judgment of an additional handicapping condition. Is the person's orientation madical, psychological, educational, or legal? Because of the varying backgrounds of the professionals answering its surveys, the Office of Demographic Studies uses a generic definition of the MHHI child. For the purpose of the annual ODS survey, "additional handicapping condition" is defined as any physical, mental, emotional, or behavior disorder that significantly adds to the complexity of educating a hearing-impaired child (*Annual Survey*, 1973). In interpreting the data presented, we must consider the variables previously described, especially the background or orientation of the persons who make the determination of an additional handicapping condition. This information is being presented in recent publications of the ODS. The degree of severity of the handicapping condition (mild, moderate, or severe) is not indicated in earlier ODS reports, but is at present being reported. The 1973 report showed that for all additional handicapping conditions, in terms of educational significance, 14.2 percent were reported as severe, 33.6 percent moderate, and 43.4 percent mild. No report was given on degree of severity for 8.8 percent of the conditions.

Table A, Summary of Data on Additional Handicapping Conditions, shows that the number of students included in the survey has risen since the initial survey in 1968. In 1974-75 it represented approximately 80 percent of the hearing-impaired children attending programs. While the number of students has increased, the percentage of students reported as having an additional handicapping condition has not increased significantly (lines 3-b and 4-b).

Table B is a summary of data by types of additional handicapping conditions. The prevalence of each additional condition appears to remain fairly constant over the years that the surveys were done. The most prevalent handicapping conditions are visual disorders, emotional or behavioral problems, and mental retardation. Vernon's data (1969) relative to the five major etiologies of deafness (i.e., heredity, meningitis, rubella, prematurity, and Rh factor), show that the high percentage of visual disorders are mainly results of prematurity and rubella; mental retardation is the result of meningitis and prematurity; emotional or behavioral problems are not listed by Vernon as a consequence of his five specific etiologies.

The Office of Demographic Studies, through its surveys, has identified approximately 300 programs that provide educational services to MHHI children in the United States. What has caused this tremendous increase in educational programs for this population? Several developments, all of which are interrelated, have contributed to this growth:

1. A shift in federal funding priorities to more severely multihandicapped children in general
2. Litigation and judicial interpretations that make education the right of all children (most publicized cases are *Parents Association of Retarded Children* v. *Commonwealth of Pennsylvania* and *Mills* v. *Board of Education, District of Columbia*)
3. Parental pressure through advocacy groups
4. School districts being held responsible and accountable for the education of children

Now that all of these supposedly good things have happened to bring the educational needs of the MHHI child to the surface, the profession is scrambling around trying to fill the voids that have existed so long. Stewart (1971) cites several obstacles that impede the work being done with MHHI persons:

1. Vague nomenclature is used—the term *multihandicapped* is too vague and lacks the ability to communicate the problem.
2. The physical basis of the multihandicapped is described, but it is not related to the sociocultural and family interaction variable.
3. Implementation of behavioral modification techniques which are reported to have successful results is lacking. A stern disciplinarian approach is still being taken.
4. Media materials for low verbal and low functioning deaf persons are lacking.

5. Education and rehabilitation programs for severely multihandicapped persons have produced awareness of the problems and the needs of these people, but only minimal attempt has been made to share the information.

A sixth obstacle should be added to Stewart's list:

6. There is a lack of trained personnel to deal successfully with the problems presented by the MHHI child.

If the sixth obstacle were met, a definite bearing on the first five would be felt. At the present time, to my knowledge, only six colleges or universities offer teacher-training programs in education of the MH child. No program offers major emphasis on the MHHI child. Gallaudet College in Washington, D.C., has had a teacher-training program in the area of deafness since 1891 but only this past fall was a MHHI area of specialization added to the program, making it, I believe, the first of its kind in the country. Certification in the area of the MHHI has been requested, for students completing the specialization, from the Conference of Executives at the American Schools for the Deaf.

The graduates in the MHHI specialization program will continue to receive the heavy concentration in language development which has always been offered and which is so vital in the education of all hearing-impaired children. They will receive pragmatic backgrounds in principles of diagnostic and prescriptive teaching, behavioral objectives, behavioral modification techniques, a thorough understanding of the various handicapping conditions and their relationships to one another, exposure to a variety of MHHI children through aiding experiences, and practice teaching in a well organized and structured program for MHHI children.

In closing, I may say that the educational future of MHHI children is considerably brighter today than it was as few as two or three years ago in spite of the many still unmet needs. As residential schools, day schools, and other educational institutions continue to establish educational programs with well trained and qualified personnel, we will see more postsecondary and vocational training programs developing to foster the MHHI person's independence and productivity in our society.

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The Blind Multihandicapped Child

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Because there are many ramifications to be considered when we speak of the multihandicapped blind child, let us consider the range and the scope of the handicapping conditions that might be encountered with a child labeled multihandicapped blind. Each handicap may be congenital or adventitious. It may be mild, moderate, or severe in degree; temporary or permanent; progressive or static. A child may also have a congenital visual handicap with one or more additional impairments from birth. There are a great variety of possible handicapping conditions: a learning handicap or retardation, severe emotional disturbance, orthopedic handicap, aphasia, severe language delay, or hearing handicap. So when we say we have a multihandicapped child with congenital visual impairment, we really may not know very much about the child except that the condition started very early, either prenatally or at birth. We do not know much about either the handicaps or their relationship to the child and the child's needs. All we know is that few programs are presently prepared to educate this child with multiple needs.

Another child, born with a visual impairment, may later become adventitiously multihandicapped. Consider the child who had some other congenital handicap and became blinded, or the child who was "normal" at birth but became adventitiously multihandicapped. Knowing what kind of a background the child has had before or after the onset of the handicaps does make a difference. We need to know a great deal about children before we can even begin to define them, even though we may have labeled them "multihandicapped blind."

One needs to consider whether the handicapping conditions are mild, moderate, or severe. The degree of severity will depend on the medical degree of involvement and the effect of that condition on the individual child. Is the condition temporary or permanent? Is it progressive or static in nature? Answers to each of these questions are necessary before one can fully define the child's condition.

Look at the child's assets. Concentrate on these assets rather than on deficits. What *does* he or she have? In Special Education we tend to label children in a negative manner. We tell what they do not have. When we label by deficits, we state everything that is limited, and our attitude is negative. But the child does have some things. If we can say, "this is a child who has . . . " and list all those positive aspects, then, educationally speaking, you the teacher have some place to begin.

When considering the multihandicapped visually impaired child, we need to decide which is the primary handicap and which is the secondary handicap. For example, let us consider the blind child who has cerebral palsy as an additional handicap. What might the major or primary handicap be? If you are a teacher of the orthopedically handicapped, you may say the cerebral palsy is the primary handicap. A teacher of the visually handicapped may consider the blindness the primary handicap. So to what program does the child belong? The orthopedic program staff states that it is not equipped or trained to teach the blind aspect of learning, and the visually handicapped program staff states that its equipment and training does not lend itself to the education of the cerebral palsy aspect of the child. Each program agrees that the child is in need of a program, but each states that it is not the appropriate program.

If we look at this child as a child, first, we can consider from an educational viewpoint which learning channels are most significantly damaged or deficient and which are the most receptive or intact. This knowledge will give a clue as to what the primary emphasis for education should be. If the child is a visual learner, that is, if he or she learns best through the channel of vision even though this is an impaired channel, then blindness *is* the primary handicap. If the child is a motor learner (must *do* something to understand and to learn), then the primary handicap will probably be the orthopedic handicap. When the channel that is most needed by the individual to learn is damaged, that becomes the primary handicap.

No one can look at a piece of paper at an Admissions and Dismissal meeting and say "Obviously, based upon this medical data, this child belongs in . . ." (this program or that). One must know the child. At this point the teacher becomes a very significant person. The teacher must functionally assess and educationally diagnose the strengths and weaknesses, assets and deficits, and educational needs of this individual child. The teacher needs to be a part of the input at the staff meetings because the teacher probably knows the child as well as, if not better than, anyone else. You, the teacher, may not know all the jargon used by specialized professionals, but if they listen to what you have to say and can help you to translate it into the terminology of their specialty, you will be pleasantly surprised at the equivalent data that you have found through classroom observations and assessments that will be substantiated by more formal data. You as the teacher are a good assessment tool.

You must make annotated records in your classroom and keep these records. If you cannot sit on the Admissions and Dismissal meetings, be sure to be aware of who does, so that you can give your input to them. Learn the jargon of the other specialists so that you can communicate more easily with them.

One handicap does not exclude the possibility of another. As you watch the children in your classroom, you may perhaps notice that one of them does not meet your expectations. You sense that something is different, even if you cannot explain what that difference is. You may be the first person to draw attention to that child's needs. Except for the parents, you see that child and are with him or her in more circumstances than any other individual. So many skills may be needed in order to assess, observe, and understand—to function in the many roles of the teacher to the betterment of your students.

You need to have a good background in communication. Communication considered in the broadest sense of the word includes language development, cognitive and conceptual development, and receptive and expressive systems. What about the deaf-blind child who comes to you without a symbolic communication system? You may not say that this child does not have any language; you may say only that this child has no system of symbolic communication. He or she may know many concepts and perhaps is just waiting for someone to put a label on the object or idea.

Be aware of the difference between the *receptive* and the *expressive* aspects of language. Think how long it takes infants to gain receptive symbolic language, how long we program them in words, concepts, and phrases before they come out and say wonderful things like "wah wah" or "ma ma." The deaf-blind child is saying to us, "Give me time once you start a symbolic system of communication. Input millions of times before you begin to expect me to give it back to you." The deaf-blind child needs the time.

Never get discouraged. Do not give up. Just because the deaf-blind child does not give language back to you does not mean that he or she is not learning or receiving. Give the child at least the same time for this developmental level that you would give any child before you expect a return. We tend to say with our children, for example: "We will introduce the concept of milk today. By the end of the week the child will sign milk, and by the end of the month, will say milk." No! Let's offer the handicapped child the opportunity and the time to gain a full understanding of what we are talking about and to understand the concept of receptive and expressive language before we start to demand that he or she give it to us.

You need to have a good background in motor development, both in fine and gross motor aspects. Some gross motor skills are prerequisite to fine motor skills. If your training was in the area of deaf education or the visually handicapped and now you find yourself teaching a three-year-old rubella child who has a developmental delay and has not started walking, you begin to realize the need for motor development information. The relationships between gross and fine motor abilities and other educational areas become clear. You need to learn some of the language of the occupational therapist and the physical therapist so that you can communicate with them. If you want them on your teaching team, you had better go to them and be receptive to what they have to offer to you and the child. Study the basics of normal growth and development before you look at the deviations. With this background you are better prepared to sequence the gross and fine motor aspects of this child's needs with other cognitive needs. You can teach the whole child better.

There is much written on the academics for the normal child and for a child with basically a single handicapping condition. Little has been done on the academic side of education with the multihandicapped child, other than simple modifications from previously written curriculums.

What about pre-academics and the nonacademic areas? Can a child who does not have the ability to learn without an expressive language system be placed in a pre-academic program? How soon can you initiate pre-academics? Consider the concept of classification. At what age can you begin? In what way?

Have you ever put a normal child on a rug with many objects all of the same color? The next day (or after several days depending on the learning rate of the child) put on the rug all of the one-color objects and add one object of a different color. The child will move to that object and reject it. He or she now has the concept of sameness of color and initial classification by color. The child may not know the terms *same, different,* or *color* or the names of colors, but he or she understands that one does not belong with the others. The child now has the concept and is ready for the term or label.

So a child at a very low level may be able to begin a skill if *you* do a good job of task analysis. If you have not broken down the old task of lacing a shoe into 100 steps, then you should go home and try it. If a child cannot lace and tie his or her own shoe, where do you begin to help? Where is the breakdown, the problem? Let us remember that there are many skills in the academic areas and pre-academic areas which you must be very familiar with. A firm knowledge and awareness of how to do a task analysis for each of those skills will greatly benefit the children with whom you work.

While considering academics and pre-academics, please do not forget all of those daily functional skills we all need for survival and pleasure. Are you giving the children skills to meet their personal needs? Can you give them the privacy they need to be independent human beings? Many of our multihandicapped children are slow to develop their daily living skills, so we need to teach them these skills. For example, we are toilet training many children. I hope you are not training children on portable pottys in the middle of the classroom with everyone peering over them saying "Have you gone yet?" I do not know about you, but I am sure that if I were a child, I would not be able to perform with a classful of adults looking over me. And yet, I have been in many classes where this is occuring. We need to give these children examples of the atmosphere and attitudes we are attempting to foster in them. If we want them to be socially acceptable, then we must give them privacy and teach them acceptable manners.

Are you taking these children into the community, teaching them to walk on the sidewalk and not in the street? How to get food at a McDonald's drive-in and eat there? Acceptable manners for different situations? The concept of paying for something at a store rather than simply putting what they want in their pockets and leaving?

Are the skills you are teaching really leading to functional skills usable later in life? If the child is never going to drive a car, are you teaching bike riding and walking for endurance and for a specific destination? You need to be concerned with the long-term goals for each child—to evaluate what you are teaching to see if these skills are really appropriate for the needs of that child now and in the future.

You will need to develop good skills in observation. Request an extension course on observation from your local university or college, and learn well. It will be the basis of your assessment and teaching. Learn how to teach others (parents and volunteers) to help you observe. you cannot observe and teach at the same time. Observing is a passive skill; teaching, an active skill. To gain some objectivity you must remove yourself from the situation while observing, unless you are simply noting an event or an occurrence. Once you have the data, do not be afraid to try interpreting them. What do you think it all means? What do you know from this information? Take these data to a specialist if you need help to gain more insight.

Those who come to your classroom to help you and your children should also have some understanding of the children and the program before they begin to work with a specific child. Try to think of the type of information that another person needs before he or she begins to work with one of your children. Consider for a moment the psychologist who comes to your class. Remember the old saying, "What's in it for me?" If there is nothing in it for the child, you can guarantee nonperformance or low performance by the child for the psychologist. You need to help each of the specialists understand all of the ramifications and conditions which will allow the child to demonstrate his or her abilities fully. But consider this as well: why bother to test a child if the results of that test will not be helpful to you, the teacher, in placing the child more appropriately?

Let us consider children who you feel are probably of normal intelligence or better but are functioning about two years below level. Such children may be just starting on academic work and have two severe handicaps. Are such children

really retarded? Probably not, but I am sure they will score low. You might just test them right out of the program you feel is the most appropriate. Sometimes your awareness and observations, included with a note, may be more to a child's benefit at this time than allowing him or her to be tested. For a multihandicapped child, testing may be more harmful than helpful.

You need to learn to write very concise goals and objectives in behavioral terms, so that you will know exactly where you are going, how you are going to get there, and when and to what extent or degree you have reached that objective. Your list of goals and objectives will also tell you what the next step will be as you move along the sequence of objectives to that goal. Those of you who are now involved in writing behavioral objectives know that it takes time. But if you do not do it, you do not know where you are going, and this is not fair to the child. Also, you do not have proof of the child's progress, and this is not fair to yourself.

You need to develop the knack of being a good team member in addition to being a good leader. Can you take information and suggestions from others as willingly as you can give them? Do you feel secure in your functions and beliefs as well as in the understanding of the roles and jargon of thers on your team: speech therapist, audiologist, psychologist, therapist, and parents? You can gather help directly and indirectly from many sources if you are open and receptive. Remember that you are the only person other than the parent who is with that child daily. So you are the logical person to give continuity, to channel input from the many who are interested. All information is filtered through you. If you cannot function as a good team member, then you will not have the give-and-take of information that is so important to your pupils. You may be able to help the specialists who know their area well but have never applied their knowledge to children with two handicaps. You can assist them to grow, and you will find you will both grow together. A good team works together.

Individualize for each child. Try to anticipate needs. Always be at least one step ahead of the child if the skill or task is new to you. Keep records of what you are doing. Put it all on paper. Get it down. If you cannot, then train your aide or volunteer to assist you. You cannot remember this week what a child was like a month ago or six months ago; you have to work too intently with that child. Use videotape if it is available. Do not deny yourself your own expertise. Put your accomplishments on paper! Be aware of your strengths—what you do know—and your weaknesses, and do something about these weaknesses. Continue to grow and improve. Don't be afraid to say, "I think so, but I can't prove it"; or "I'm really sure that it works, but I don't know why." Your records of experience may be the very best method or direction you could have found, and you will be able to use them again and share with others. Have faith in yourself. You are the one out there actually doing the teaching. If you have a positive perception of yourself, if you see yourself as an interesting, capable individual, you will be a much better teacher than if you are insecure and see yourself as an extension of some curriculum. Every curriculum you see will need to be modified to meet the individual needs of your students. There is no cookbook recipe! Each time you teach something, you are developing a brand new curriculum modification. So keep track of what is happening. Be sure that you are not so method-oriented that you forget the child. Do not be so concerned with what *you* are doing that you forget what the child is doing. Any method can only assist you; it is not the end in itself. A method is a vehicle, and you will probably need to change buses somewhere along the road.

Few programs have many ancillary kinds of personnel. You cannot simply pick up the phone this afternoon and have a specialist there in the morning. You will need to find out what is available within your community. Locate each and every resource, direct and indirect. Where is it? What are the costs, the visitation possibilities, the referrals? You will become a source of information for everyone working with your children.

Multihandicapped children have been around virtually since the beginning of time. There are more handicapped children now because of the state of modern medicine, and they are now being educated, but they are not "new." Nor is the area of deaf-blind education new; it is simply that deaf-blind children have gained public attention. You teachers are the ones that are new and unique. You are opening new frontiers of education. These children have had needs for a long time, so please do not get discouraged. Do not give up! When you think that you have "had it," that you have used every idea in six different ways and are still not getting the desired results, don't give up! Talk to people and keep on working. If you give up, what is left for the child? When it is time for the child to go to a new teacher, be sure that you are positive in what you say to the teacher, so that each child

will have the benefit of a positive start with each teacher and program. If you have had a child in your class for two years, see if there is not some other appropriate placement for him or her. Everyone has only so much to give each child. Give each child opportunity to learn from many and to expand, not limited by your preferences and limitations. If you are in a program by yourself, see if you cannot attach yourself to another program, maybe to a program for the deaf, blind, retarded, or the orthopedically handicapped. Not only does the child need more input than you have to offer, but also you need to expand your experience.

You need to have interests both within special education and outside of it. You need to be *somebody* in addition to your role as a teacher. You must be an interesting person. Do fun things. Come into your class on Monday morning fresh, not having lived special education all weekend too. You need to renew your enthusiasm to continue to foster enthusiasm in your children. So go out and be yourself, be somebody outside of and in addition to your professional role. Enjoy life.

Whatever you do, don't be afraid to try to do something new because you know no one who has done it before. If, way down inside in the pit of your stomach, you say "this feels right," then try it. And even better, write it down—what you did and what happened with the children. You may improve on it later, or someone else may interpret it for you, citing research to prove why it really was a good idea. Do not be afraid to try if it feels comfortable. Borrow from other programs. Often there are more similarities than differences between the basics of various programs. Keep in mind that your program is only transitional for the child, be it an institution, special school, day program, resource room, or integrated program. You are temporary for the child, not terminal. You need to continually reevaluate the child's needs and decide if you are still the most appropriate placement for him or her. Do the same with your methods. Are you still the appropriate teacher for *this* child?

Finally, keep in mind where you are going. Is it more important for a child to learn to read the word "run" in a book or the sign "Pull" on a door? "Men" and "Women" printed on the restroom door or "run Spot run" in a basic reader? If you know where you are going, then you will be able to evaluate the skills you are teaching and to decide if your curriculum is appropriate for the needs of your children. You will be able to make decisions securely as to why you are doing what you feel is right. If you know where you are going, if you are comfortable with it, if there is something in it for a child and there is some reason for him or her to do it, then you will probably have a very successful program.

Remember to enjoy yourself, and don't give up!

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